

## WEST Search History

DATE: Friday, December 21, 2007

Hide?	<u>Set Name</u>	<u>Query</u>	<u>Hit Count</u>
		<i>DB=PGPB,USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L5	L4 and branch\$	12
<input type="checkbox"/>	L4	L1 and ((hydroxyethyl or hydroxypropyl)near(starch or glycogen or amylopectin)).ab.	24
<input type="checkbox"/>	L3	L2 and (branch\$)	63
<input type="checkbox"/>	L2	L1 and ((hydroxyethyl or hydroxypropyl)near(starch or glycogen or amylopectin))	126
<input type="checkbox"/>	L1	514/60.icls. or 514/60.ccls. or 536/111.icls. or 536/111.ccls.	791

END OF SEARCH HISTORY

FILE 'HCAPLUS' ENTERED AT 13:49:51 ON 21 DEC 2007

L1 3584 S (HYDROXYETHYL OR HYDROXYPROPYL) (2A) (STARCH OR GLYCOGEN OR AMY  
L2 1962415 S (PERITONEAL DIALYSIS) OR PLASMA OR BLOOD  
L3 988 S L1 AND L2  
L4 690 S L3 AND (PY<2003 OR AY<2003 OR PRY<2003)

FILE 'HCAPLUS' ENTERED AT 13:50:52 ON 21 DEC 2007

L5 203721 S BRANCH?  
L6 13 S L4 AND L5

=> file hcaplus  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.63	0.63

FULL ESTIMATED COST

FILE 'HCAPLUS' ENTERED AT 13:49:51 ON 21 DEC 2007  
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FILE COVERS 1907 - 21 Dec 2007 VOL 147 ISS 26  
FILE LAST UPDATED: 20 Dec 2007 (20071220/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s (hydroxyethyl or hydroxypropyl) (2a) (starch or glycogen or amylopectin)

	111740 HYDROXYETHYL
	47288 HYDROXYPROPYL
	172009 STARCH
	54316 GLYCOGEN
	6863 AMYLOPECTIN
L1	3584 (HYDROXYETHYL OR HYDROXYPROPYL) (2A) (STARCH OR GLYCOGEN OR AMYLOP ECTIN)

=> s (peritoneal dialysis) or plasma or blood

	33298 PERITONEAL
	59679 DIALYSIS
	3510 PERITONEAL DIALYSIS
	(PERITONEAL(W) DIALYSIS)
	931207 PLASMA
	1350499 BLOOD
L2	1962415 (PERITONEAL DIALYSIS) OR PLASMA OR BLOOD

=> s l1 and l2

L3	988 L1 AND L2
----	---------------

=> s l3 and (PY<2003 or AY<2003 or PRY<2003)

	22927434 PY<2003
	4470233 AY<2003
	3949084 PRY<2003
L4	690 L3 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> file stnguide

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION

FULL ESTIMATED COST

2.60

3.23

FILE 'STNGUIDE' ENTERED AT 13:49:58 ON 21 DEC 2007  
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FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Dec 18, 2007 (20071218/UP).

=> d 14 250-255 ti  
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L4 ANSWER 250 OF 690 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI Influence of low molecular weight hydroxyethyl starch  
(HES 40/0.5-0.55) on hemostasis and hemorheology

L4 ANSWER 251 OF 690 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI Effects of antifreeze proteins on red blood cell survival during  
cryopreservation

L4 ANSWER 252 OF 690 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI Evaluation of clinical efficacy and safety of hydroxyethyl  
starch

L4 ANSWER 253 OF 690 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI The effects of desmopressin and 6% hydroxyethyl starch  
on factor VIII:C

L4 ANSWER 254 OF 690 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI Effect of combined treatment by highly molecular cryoprotectants and  
1,2-propanediol on survival of red blood cells during  
cryopreservation

L4 ANSWER 255 OF 690 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI Highly substituted hydroxyethyl starch (HES 200/0.62)  
leads to type-I von Willebrand syndrome after repeated administration

=> file hcaplus  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.06	7.99

FULL ESTIMATED COST

FILE 'HCAPLUS' ENTERED AT 13:50:52 ON 21 DEC 2007  
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FILE COVERS 1907 - 21 Dec 2007 VOL 147 ISS 26  
FILE LAST UPDATED: 20 Dec 2007 (20071220/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s branch?

L5 203721 BRANCH?

=> s l4 and l5

L6 13 L4 AND L5

=> file stnguide

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.60	10.59

FILE 'STNGUIDE' ENTERED AT 13:50:54 ON 21 DEC 2007  
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FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Dec 18, 2007 (20071218/UP).

=> d l6 1-13 ti

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L6 ANSWER 1 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI Highly-branched, low substituted starch products for use as plasma expanders

L6 ANSWER 2 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI L-nucleic acid conjugates for use in diagnosis and therapy

L6 ANSWER 3 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI Characterization of hydroxyethyl starch by polymer analysis for use as a plasma volume expander

L6 ANSWER 4 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI Comparison of the properties of dextran and hydroxyethyl starch substituted with benzene tetracarboxylate in terms of their use in blood transfusion

L6 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI Fine structure and hyperfine structure of clinically applied hydroxyethyl starch

L6 ANSWER 6 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI Hydroxyethyl starch as a plasma expander: physicochemical properties and enzymic degradation

L6 ANSWER 7 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI Studies on hydroxyethyl starch. Part I: Molecular characterization by size exclusion chromatography coupled with low-angle laser light scattering

L6 ANSWER 8 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
TI Characterization of hydroxyethyl starch used as a plasma expander

L6 ANSWER 9 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
 TI Characterization of hydroxyethyl starch used as a  
 plasma expander

L6 ANSWER 10 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
 TI Long term preservation of whole blood with hydroxyethyl  
 starch

L6 ANSWER 11 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
 TI Hydroxyethyl starch. Fractionation and molecular  
 weight. Distribution by gel chromatography

L6 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
 TI Dilute solution properties of hydroxyethyl starch

L6 ANSWER 13 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
 TI Hydroxyethyl starch: extracellular cryophylactic  
 agent for erythrocytes

=> d 16 1 3 4 5 6 7 8 9 10 11 12 13 ti abs bib

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L6 ANSWER 1 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
 TI Highly-branched, low substituted starch products for use as  
 plasma expanders

AB The invention concerns modified hydroxyethyl and hydroxypropyl starches  
 for clin. use as plasma expanders that have a branching  
 degree of 8-20 mol%, a substitution degree (MS) of 0.05-0.3 and mol. weight  
 of 10,000-450,000. The products are used in peritoneal  
 dialysis. According to expts. with rats, the products deplete  
 faster from liver, spleen, lung and kidney than conventional starch  
 products.

AN 2004:198158 HCAPLUS <<LOGINID::20071221>>  
 DN 140:223241  
 TI Highly-branched, low substituted starch products for use as  
 plasma expanders

IN Henning, Klaus  
 PA Fresenius Kabi Deutschland G.m.b.H., Germany  
 SO Ger. Offen., 5 pp.  
 CODEN: GWXXBX

DT Patent  
 LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10237442	A1	20040311	DE 2002-10237442	20020816 <--
	DE 10237442	B4	20040819		
	WO 2004022602	A1	20040318	WO 2003-EP8411	20030730 <--
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,				
	CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				
	GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,				
	LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,				
	PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,				
	TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW:				
	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,				
	KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,				
	FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,				
	BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2003251668	A1	20040329	AU 2003-251668	20030730 <--
	EP 1530593	A1	20050518	EP 2003-793660	20030730 <--
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

	IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK	
CN 1675248	A	20050928 CN 2003-819356 20030730 <--
JP 2005539107	T	20051222 JP 2004-533291 20030730 <--
US 2006032400	A1	20060216 US 2005-524424 20050722 <--
PRAI DE 2002-10237442	A	20020816 <--
WO 2003-EP8411	W	20030730

L6 ANSWER 3 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Characterization of hydroxyethyl starch by polymer analysis for use as a plasma volume expander

AB Hydroxyethyl starch is currently finding increasing use as a basis material for plasma volume expanders. In clin. applications it is desirable to have a precise knowledge of the steric and chemical structure, as these affect the pharmacokinetics and pharmacol. Characterization involved the determination of the mean molar masses and distribution functions of various hydroxyethyl starches, with molar masses ranging from 40,000 g/mol to 200,000 g/mol and degrees of substitution from 0.38 to 0.64, by means of size exclusion chromatog. followed by double detection (MALLS/RI). Hydrodynamic data (Staudinger indexes, Huggins consts. and equivalent diams.) were determined by viscometric means.

The chemical structure of the hydroxyethyl starches were clarified by {1H}-13C NMR spectroscopy. Signal assignment for the {1H}-13C NMR spectra made it possible to carry out an absolute determination of the molar, mean and partial degrees

of substitution and the degree of branching. The partial degree of substitution of the carbon atom C-2 was found to constitute between 60 and 80% of the total degree of substitution. This value is significantly larger than the partial degrees of substitution at the atoms C-3 and C-6, which were found to contribute up to approx. 10% and 20% resp. of the total degree of substitution. Degrees of branching ranging from 3.1% to 5.5% were detected.

AN 1994:38094 HCAPLUS <<LOGINID::20071221>>

DN 120:38094

TI Characterization of hydroxyethyl starch by polymer analysis for use as a plasma volume expander

AU Kulicke, Werner Michael; Roessner, Dierk; Kull, Wiebke

CS Hamburg, Germany

SO Starch/Staerke (1993), 45(12), 445-50

CODEN: STARDD; ISSN: 0038-9056

DT Journal

LA English

L6 ANSWER 4 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Comparison of the properties of dextran and hydroxyethyl starch substituted with benzene tetracarboxylate in terms of their use in blood transfusion

AB Solns. of dextran and hydroxyethyl starch are used as plasma substitutes but are not capable of carrying oxygen in vivo. To transform these solns. into blood substituents, it has been suggested that the natural oxygen-carrier protein, i.e. human Hb, is bound to these polymers. However, the polymers have to be modified so that in the protein conjugate Hb exhibits the appropriate oxygen-binding properties. Thus, covalent conjugates of oxyHb and of dextran substituted with benzene tetracarboxylate have been used and appear effective vascular oxygen carriers. The same procedure was applied to hydroxyethyl starch but this polysaccharide, because of its branched nature, could not be substituted with benzene tetracarboxylate without being highly crosslinked as evidenced by NMR and low-angle laser light-scattering analyses. In the Hb-hydroxyethyl starch covalent conjugates, the polymer-linked benzene tetracarboxylate groups are not easily accessible to the allosteric site of the protein as in the dextran conjugates, and therefore cannot improve its oxygen-binding properties.

AN 1993:219728 HCAPLUS <<LOGINID::20071221>>

DN 118:219728

TI Comparison of the properties of dextran and hydroxyethyl starch substituted with benzene tetracarboxylate in terms of their use in blood transfusion

AU Huguet, Marie Laure; Prouchayret, Florence; Grandgeorge, Michel; Dellacherie, Edith

CS Lab. Chim. Phys. Macromol., ENSIC, Nancy, 54001, Fr.

SO Carbohydrate Polymers (1993), 20(2), 125-30

CODEN: CAPOD8; ISSN: 0144-8617

DT Journal

LA English

L6 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Fine structure and hyperfine structure of clinically applied hydroxyethyl starch

AB The Mark-Houwink-relations for different samples of clin. used hydroxyethyl starches were established by multi-detection HPGPC. In combination with the degree of branching, the degrees of substitution DS and the molar substitution MS for the different mol. regions were measured by gas chromatog. methylation anal. Within the mol. regions of nonreducing anhydroglucose units, branching units and linear units characteristic differences were found.. For hydroxyethyl starches which were prepared from enzymically hydrolyzed waxy corn starch by  $\alpha$ -Amylase, a significantly higher degree of branching was found than for samples prepared by acid hydrolysis. The clin. relevance of these results is discussed.

AN 1992:537593 HCAPLUS <<LOGINID::20071221>>

DN 117:137593

TI Fine structure and hyperfine structure of clinically applied hydroxyethyl starch

AU Sommermeyer, Klaus; Hildebrand, Ulrich; Cech, Franz; Pfitzer, Edith; Henning, Klaus; Weidler, Burghard

CS Fresenius AG, Oberursel, 6370, Germany

SO Starch/Staerke (1992), 44(5), 173-9

CODEN: STARDD; ISSN: 0038-9056

DT Journal

LA German

L6 ANSWER 6 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Hydroxyethyl starch as a plasma expander: physicochemical properties and enzymic degradation

AB Hydroxyethyl starch (HES) as a plasma expander was subjected to measurements of fundamental physicochem. properties as a polymer. In order to investigate the efficacy and security for the clin. use, enzymic degradation of HES was studied in vitro with *Bacillus amyloliquefaciens*  $\alpha$ -amylase (BLA) and with human plasma. A fast decrease of the intrinsic viscosity,  $\eta$ , of HES in the initial stage of degradation with BLA was followed by a gradual decrease and approach to limiting values, which depended on the samples. Original and degraded samples of HES were fractionated by gel filtration, and several properties of the fractions were measured. Different relations between  $\eta$  and weight average mol. wts. ( $M_w$ ) were obtained, and the structure and some properties of the fractions should be different among the original samples; HES is a highly branched polymer. Characteristics of HES were noticeable heterogeneities not only in the mol. weight spread over very wide region but also in the structure and the degree of substitution (D.S.) both inter- and intra-molecularly. Two samples of HES, 6-HES and Hessel, having high values of  $M_w$  and d.s., contained fractions of very high mol. weight and were degraded insufficiently with enzyme. Remaining fragments of high-mol. weight could not permeate the kidney membrane, suggesting the possibilities of remaining and/or accumulation of them in human bodies. On the other hand, Hespander, having small a  $M_w$  and d.s. was degraded as fast as amylopectin. In this



HES the substitution of hydroxyethyl groups into amylopectin do not affect the validity to prolong the persistence time of the plasma expander. Considerable amount of small mols. in Hespander, contained originally and produced by degradation, could be excreted rapidly and may impair the kidney function, besides the very small mols. may be released through vascular wall resulting in the reduction of efficacy as the plasma expander and the possibilities of accumulation into organs and tissues in human bodies. Thus, the efficacy and security of the present products of HES are not reliable as plasma expanders, and further investigations and improvements should be required for the clin. use.

AN 1987:502587 HCAPLUS <<LOGINID::20071221>>

DN 107:102587

TI Hydroxyethyl starch as a plasma expander:  
physicochemical properties and enzymic degradation

AU Ohta, Kazuko; Kawahara, Kazuo

CS Sch. Pharm. Sci., Nagasaki Univ., Nagasaki, Japan

SO Seitai Zairyo (1987), 5(1), 3-13

CODEN: SEZAEH; ISSN: 0910-304X

DT Journal

LA Japanese

L6 ANSWER 7 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Studies on hydroxyethyl starch. Part I: Molecular  
characterization by size exclusion chromatography coupled with low-angle  
laser light scattering

AB Two com. available hydroxyethyl starch (HES)  
[9005-27-0] prepn. (in clin. use as plasma expanders) specified  
with .hivin.Mw = 450,000/MS = 0.7 and .hivin.Mw = 200,000/MS = 0.5, resp.,  
and 3 exptl. HES-samples (supposedly similar to the com. product with the  
specification 450,000/0.7, except of one with MS = 0.5) were studied. The  
latter were prepared via acid or enzymic hydrolysis of waxy-maize starch.  
Each of the samples was characterized by its intrinsic viscosity and molar  
substitution, and was studied with low-angle laser light scattering  
(LALLS) and with size exclusion chromatog. (SEC) coupled with LALLS. The  
weight-average mol. weight .hivin.Mw of the com. samples was 60-80% higher  
than the

value given in the product declaration. This discrepancy can be explained  
by the argument that previous measurements were not carried out at  
sufficiently small scattering angles to enable reliable extrapolation to  
zero angle. The calibration functions .hivin.Mw(v) of the individual HES  
samples measured by SEC/LALLS-coupling are identical over a broad range of  
the elution volume v. The small, but detectable differences in the  
.hivin.Mw(v)-functions indicate interesting differences between these  
HES-prepn. with respect to the effective hydrodynamic d. of the  
branched HES-mols.

AN 1985:225972 HCAPLUS <<LOGINID::20071221>>

DN 102:225972

TI Studies on hydroxyethyl starch. Part I: Molecular  
characterization by size exclusion chromatography coupled with low-angle  
laser light scattering

AU Lederer, K.; Huber, C.; Dunky, M.; Fink, J. K.; Ferber, H. P.; Nitsch, E.

CS Inst. Chem. Phys. Technol. Kunststoffe, Montanuniv. Leoben, Austria

SO Arzneimittel-Forschung (1985), 35(3), 610-14

CODEN: ARZNAD; ISSN: 0004-4172

DT Journal

LA English

L6 ANSWER 8 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Characterization of hydroxyethyl starch used as a  
plasma expander

AB Intrinsic viscosities, and number and weight average mol. wts. were determined  
for a com.

sample of hydroxyethyl starch (I) [9005-27-0] and its

fractions. The exponent  $a$  of the Mark-Houwink equation was 0.27 for 0.1 M-NaCl aqueous solution and 0.24 for DMF solution, showing that I has many branches. Compared with the mol. weight,  $M_w = 18.45 \times 10^4$ , the viscosity was very low, 0.165 dL/g in H<sub>2</sub>O, possibly because of such a highly branched mol. configuration.

AN 1979:478833 HCAPLUS <<LOGINID::20071221>>

DN 91:78833

OREF 91:12677a,12680a

TI Characterization of hydroxyethyl starch used as a plasma expander

AU Sakamoto, Ryuichi; Kojima, Tokuhisa; Yamaguchi, Shizuo

CS Fac. Eng., Univ. Gifu, Gifu, Japan

SO Gifu Daigaku Kogakubu Kenkyu Hokoku (1979), (29), 22-6

CODEN: GDKHAO; ISSN: 0376-0332

DT Journal

LA English

L6 ANSWER 9 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Characterization of hydroxyethyl starch used as a plasma expander

AB The plasma expander hydroxyethyl starch [9005-27-0] was prepared from hydrolyzed corn starch [9005-25-8] and ethylene oxide [75-21-8], and its viscosity, osmotic pressure, light scattering measurement, and other phys. properties were determined. The mol. weight of the preparation ranged from  $1.84 \times 10^4$  to  $10.3 \times 10^4$  as determined by the osmotic pressure method, and from 4.7 to  $40.08 \times 10^4$  by the light scattering method. The exponents of the Mark-Houwink equation indicated that the preparation was a highly branched polymer. The clin. application of the plasma expander is discussed.

AN 1977:444216 HCAPLUS <<LOGINID::20071221>>

DN 87:44216

OREF 87:6941a,6944a

TI Characterization of hydroxyethyl starch used as a plasma expander

AU Sakamoto, Ryuichi; Kojima, Tokuhisa; Yamaguchi, Shizuo

CS Fac. Technol., Gifu Univ., Kakamigahara, Japan

SO Kobunshi Ronbunshu (1977), 34(4), 275-9

CODEN: KBRBA3; ISSN: 0386-2186

DT Journal

LA Japanese

L6 ANSWER 10 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN

TI Long term preservation of whole blood with hydroxyethyl starch

AB Studies in vitro indicate that hydroxyethyl starch is an effective extracellular cryoprotective agent for erythrocytes. It is as effective as poly(vinylpyrrolidinone) in cryophylactic ability. It is degraded to glucose units in the circulation, is not retained in tissues, and is inexpensive to produce. Changes in the size and degree of hydroxyethylation of the branched-chain starch may result in a more effective cryoprotective agent.

AN 1973:69605 HCAPLUS <<LOGINID::20071221>>

DN 78:69605

OREF 78:11063a,11066a

TI Long term preservation of whole blood with hydroxyethyl starch

AU Weatherbee, Lee

CS Veterans Admin. Hosp., Ann Arbor, MI, USA

SO U. S. Nat. Tech. Inform. Serv., AD Rep. (1972), No. 747645, 33 pp. Avail.: NTIS

From: Govt. Rep. Announce. (U.S.), 1972, 72(20), 48

CODEN: XADRCH

DT Report

LA English

L6 ANSWER 11 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
 TI Hydroxyethyl starch. Fractionation and molecular weight. Distribution by gel chromatography  
 AB The mol. weight distribution (.hivin.Mw) of fractions of hydroxyethyl starch (I), obtained by preparative gel chromatog., are determined by light scattering, osmometry, and viscometry. I was prepared by gelatinizing waxy maize starch in boiling H<sub>2</sub>O, hydrolyzing partially with dilute HCl, neutralizing the resulting solution, and treating with ethylene oxide. The substitution degree was determined by Morgan's method (1946). I had .hivin.Mw of 77,000, as compared to 55,000 for dextran. In solution the dextran mol. is more extended than the heavily branched I mol. The use of I as plasma volume expander is discussed.  
 AN 1970:45255 HCAPLUS <<LOGINID::20071221>>  
 DN 72:45255  
 OREF 72:8349a,8352a  
 TI Hydroxyethyl starch. Fractionation and molecular weight. Distribution by gel chromatography  
 AU Granath, Kirsti; Stromberg, Ragnar; De Belder, A. N.  
 CS Res. Div., Pharm. AB, Uppsala, Swed.  
 SO Staerke (1969), 21(10), 251-6  
 CODEN: STRKA6; ISSN: 0038-9056  
 DT Journal  
 LA English

L6 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
 TI Dilute solution properties of hydroxyethyl starch  
 AB The dilute solution properties of hydroxyethyl starch were examined using osmometry, light scattering, and viscometry techniques. The weight-average mol. weight, the Z-average root-mean-square radii of gyration, and the second virial coeffs. were calculated using the technique of Hunt, et al. (CA 51: 3239g) for cellulose trinitrate fractions. The degree of branching, evaluated by comparing the mean square radii, the intrinsic viscosities, and the second virial coeffs. with those of the linear counterpart, i.e. hydroxyethyl cellulose and ethyl hydroxyethyl cellulose, was estimated to be .apprx.0.3. 15 references.  
 AN 1968:4188 HCAPLUS <<LOGINID::20071221>>  
 DN 68:4188  
 OREF 68:839a,842a  
 TI Dilute solution properties of hydroxyethyl starch  
 AU Cerny, Lawrence C.; Graham, Richard C.; James, Howard L., Jr.  
 CS Utica Coll., Utica, NY, USA  
 SO Journal of Applied Polymer Science (1967), 11(10), 1941-50  
 CODEN: JAPNAB; ISSN: 0021-8995  
 DT Journal  
 LA English

L6 ANSWER 13 OF 13 HCAPLUS COPYRIGHT 2007 ACS on STN  
 TI Hydroxyethyl starch: extracellular cryophylactic agent for erythrocytes  
 AB Studies in vitro indicate that hydroxyethyl starch is an effective extracellular cryoprotective agent for erythrocytes. It is as effective as poly(vinylpyrrolidinone) in cryophylactic ability. It is degraded to glucose units in the circulation, is not retained in tissues, and is inexpensive to produce. Changes in the size and degree of hydroxyethylation of the branched-chain starch may result in a more effective cryoprotective agent.  
 AN 1967:506561 HCAPLUS <<LOGINID::20071221>>  
 DN 67:106561  
 TI Hydroxyethyl starch: extracellular cryophylactic agent for erythrocytes  
 AU Knorpp, C. T.; Merchant, William R.; Gikas, Paul W.; Spencer, Herbert H.; Thompson, Norman Winslow

CS Veterans Admin. Hosp., Ann Arbor, MI, USA  
SO Science (Washington, DC, United States) (1967), 157(3794),  
1312-13  
CODEN: SCIEAS; ISSN: 0036-8075  
DT Journal  
LA English